

In the claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Upon entry of the present amendment, the claims will stand as follows:

Please cancel claims 6, 10-11, 13, 19-30, 32-86, 88-89, 91-93, and 97-102 without prejudice.

Please amend claims 7, 8, 17, 31, 90 and 103 as follows:

1. (Previously Presented) A method of enhancing collateral blood vessel formation in a subject in need thereof comprising directly administering to sites in heart or limb tissue a composition comprising an effective amount of autologous bone marrow aspirate to induce collateral blood vessel formation in the tissue.
2. (Previously Presented) The method of claim 1, wherein the autologous bone marrow aspirate is injected.
3. (Previously Presented) The method of claim 1, wherein the autologous bone marrow aspirate is injected intramyocardially.
4. (Previously Presented) The method of claim 3, wherein the autologous bone marrow aspirate is injected trans-epicardially or trans-endocardially.
5. (Previously Presented) The method of claim 4, wherein the trans-endocardial approach is via a catheter.
6. (Cancelled)

7. (Currently Amended) The method of claim 1, wherein the autologous bone marrow aspirate has been stimulated [[by]] while growing in conditioned medium ex vivo, the conditioned medium comprising of granulocyte-monocyte colony stimulating factor (GM-CSF), endothelial PAS domain 1 (EPAS1) and hypoxia inducible factor (HIF-1).
 8. (Currently Amended) The method of claim 7, wherein the autologous bone marrow aspirate has been stimulated by contact with one or more angiogenesis stimulating cytokines secreted therefrom [[by]] while growing in conditioned medium ex vivo, the conditioned medium comprising of granulocyte-monocyte colony stimulating factor (GM-CSF), endothelial PAS domain 1 (EPAS1) and hypoxia inducible factor (HIF-1).
 9. (Previously Presented) The method of claim 1, wherein the composition further comprises Monocyte Chemoattractant Protein 1 (MCP-1) or Vascular Endothelial Growth Factor (VEGF)
- Claim 10. (Cancelled)
- Claim 11. (Cancelled)
12. (Previously Presented) The method of claim 7, wherein the autologous bone marrow aspirate has been stimulated ex vivo in culture by transient exposure to hypoxia.
- Claim 13. (Cancelled)
14. (Previously Presented) The method of claim 1, wherein the autologous bone marrow aspirate is administered in combination with one or more agent selected from a pharmacological drug or protein that enhances bone marrow production of angiogenic growth factors to promote endothelial cell proliferation, migration, or blood vessel formation.

15. (Previously Presented) The method of claim 14, wherein the autologous bone marrow aspirate and the agent or agents are administered together.

16. (Previously Presented) The method of claim 14, wherein the autologous bone marrow aspirate and the agent or agents are combined ex vivo prior to administration.

17. (Currently Amended) The method of claim 16, wherein the autologous bone marrow aspirate has been stimulated ex vivo in conditioned medium, the conditioned medium comprising of granulocyte-monocyte colony stimulating factor (GM-CSF), endothelial PAS domain 1 (EPAS1) and hypoxia inducible factor (HIF-1).

18. (Original) The method of claim 1, wherein ischemic tissue is treated.

Claims 19-30. (Cancelled)

31. (Currently Amended) The method of claim 17, further comprising culturing the autologous bone marrow aspirate prior to (b) to form conditioned medium containing bone marrow cells and secreted angiogenic cytokines and injecting the composition into ischemic heart [or limb] tissue.

Claims 32-86. (Cancelled)

87. (Previously Presented) A composition comprising cultured autologous bone marrow aspirate that has been stimulated ex vivo by exposure to hypoxia or an angiogenesis stimulating cytokine.

Claim 88. (Cancelled)

Claim 89. (Cancelled)

90. (Currently Amended) The composition of claim [[89]] 87, wherein the cytokines is MCP-1.

Claim 91-93. (Cancelled)

94. (Previously Presented) The composition of claim 87, further comprising conditioned medium in which the autologous bone marrow aspirate has been grown.

95. (Previously Presented) The composition of claim, further comprising a pharmacological drug or protein that enhances bone marrow production of angiogenic growth factors and/or promotes endothelial cell proliferation, migration, or blood vessel formation.

96. (Previously presented) The composition of claim 87 which further comprises heparin or another anticoagulant.

Claims 97-102. (Cancelled)

103. (Currently Amended) A method of enhancing collateral blood vessel formation in a subject in need thereof comprising directly administering to sites in heart or limb tissue of the subject an effective amount of conditioned medium in which bone marrow aspirate has been grown to induce collateral blood vessel formation in the heart [or limb tissue].